**AMENDMENTS TO THE CLAIMS** 

The listing of the claims will replace all prior versions, and listings, of claims in the

application.

**LISTING OF THE CLAIMS** 

The listing of claims will replace all prior versions, and listings, of claims in the

application:

**LISTING OF CLAIMS** 

Claim 1 (currently amended): An apparatus for controlling the load on articular cartilage

forming part of an articular joint connecting a first bone to a second bone of a human or animal

joint to treat arthritic conditions affecting the joint, comprising:

(a) a first fixation assembly for attachment to the first bone;

(b) a second fixation assembly for attachment to the second bone; and

a link assembly coupled to the first fixation assembly by a first pivot and coupled (c)

to the second fixation assembly by a second pivot and configured to span anatomy affected by

arthritic conditions but lacking fractures, the first and second fixation assembly thereby each

being angularly displaceable relative to the link assembly;

said apparatus provides reduction of pressure on at least a portion of the joint without

substantially resisting an angular displacement associated with relatively full mobility of the first

and second bones of the joint to thereby treat arthritic conditions affecting the joint.

Claim 2 (previously presented): The apparatus according to claim 1 in which the first

fixation assembly includes at least one pin for engaging with the first bone.

Claim 3 (previously presented): The apparatus according to claim 2 in which the first

fixation assembly includes a clamp for mounting a plurality of pins each for engaging with the

first bone, said plurality of pins being spaced along the length of the first fixation assembly.

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Claim 4 (original): The apparatus of claim 1 in which the first fixation assembly includes

engagement means for engaging at least one bone pin, the engagement means being rotatable

about a longitudinal axis of the first fixation assembly.

Claim 5 (original): The apparatus of claim 1 in which the first fixation assembly includes

engagement means for engaging at least one bone pin, the engagement means being rotatable

about a transverse axis of the first fixation assembly.

Claim 6 (original): The apparatus of claim 2 in which the first fixation assembly includes

engagement means for engaging at least one bone pin, the engagement means being

independently rotatable about a longitudinal axis and a transverse axis of the first fixation

assembly.

Claim 7 (previously presented): The apparatus according to one of claims 1-6 in which

the first fixation assembly is coupled to the link assembly by way of a first pivot in a manner

selected from the group consisting of those having one and two degrees of rotation freedom.

Claim 8 (canceled)

Claim 9 (previously presented): The apparatus according to claim 1 in which the link

assembly includes a fixed separation member for maintaining said first and second pivots at a

fixed distance of separation.

Claim 10 (withdrawn): The apparatus according to claim 1 in which the link assembly

includes a variable separation member for permitting the first and second pivots to vary in their

distance of separation within predetermined limits.

Claim 11 (withdrawn): The apparatus according to claim 10 in which the variable

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separation member includes bias means for biasing the first and second pivots towards a

maximum limit of separation distance.

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Claim 12 (withdrawn): The apparatus according to claim 10 in which the variable

separation member includes bias means for biasing the first and second pivots towards a

minimum limit of separation distance.

Claim 13 (withdrawn): The apparatus according to claim 10 in which the variable

separation member includes bias means for biasing the first and second pivots towards an

intermediate distance of separation between said predetermined limits.

Claim 14 (previously presented): The apparatus according to claim 1 further including

means for limiting the angular displacement of the first fixation assembly relative to the link

assembly and/or means for limiting the angular displacement of the second fixation assembly

relative to the link assembly.

Claim 15 (previously presented): The apparatus according to claim 1 further including

means for varying separation of the first fixation assembly and the second fixation assembly as a

function of the angular displacement of either fixation assembly relative to the link assembly.

Claim 16 (previously presented): The apparatus according to claim 1 further including a

drive member coupled to the first fixation assembly and to the second fixation assembly for

controllably varying the angular displacement of the first and second fixation assemblies relative

to one another.

Claim 17 (withdrawn): The apparatus according to claim 10 in which the variable

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separation member further includes drive means for controllably varying the distance of

separation of the first and second pivots.

Claim 18 (previously presented): The apparatus according to claim 1 further including a

sensor adapted to monitor the load applied across the link assembly.

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to monitor any one of the tensile load, compression load, shear forces or bending forces applied

across the link assembly.

Claim 20 (original): The apparatus according to claim 19 in which the sensor comprises

a strain gauge.

Claim 21 (original): The apparatus according to any one of claims 1 to 6 comprising a

pair of link assemblies each pivotally anchored to both the first and second fixation assemblies

and laterally displaced from one another.

Claim 22 (withdrawn): The apparatus according to claim 21 in which the pair of link

assemblies comprise a first link member and a second link member that are laterally and

angularly displaced from one another.

Claim 23 (withdrawn): The apparatus to claim 22 in which the first link member and the

second link members are disposed in a crosswise formation.

Claim 24 (original): The apparatus according to claim 1 further including a second

corresponding apparatus for coupling thereto by a plurality of bone pins.

Claim 25-34 (canceled)

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